In the Claims

1. (Original)   A method comprising:

storing in a data structure information representing a plurality of clients on a network; and

dynamically compressing the data structure based on network proximity information relating to the clients.

2. (Original)   A method as recited in claim 1, wherein the data structure comprises a network address of each of the clients and the network proximity information.

3. (Original)   A method as recited in claim 1, wherein said dynamically compressing the data structure based on the network proximity information comprises:

detecting when proximity measurements for at least two clients which share a network address prefix are within a predetermined range of each other; and

in response to the proximity measurements being within the predetermined range of each other for the at least two clients, merging entries for the at least two clients in the data structure.

4. (Original)   A method as recited in claim 1, further compressing losslessly decompressing the data structure.

5. (Original)   A method as recited in claim 4, wherein said losslessly decompressing the data structure comprises splitting a merged entry in the data structure representing at least two clients into a plurality of separate entries.

6. (Original)   A method as recited in claim 4, wherein said losslessly decompressing the data structure comprises decompressing the data structure in response to a detected change in network conditions.

7. (Original)   A method as recited in claim 1, wherein the data structure comprises a network address of each of the clients.

8. (Original)   A method as recited in claim 7, further comprising:

generating an encoded value from each of the network addresses;

storing each of the encoded values in the data structure in association with a corresponding network address; and

modifying one or more of the encoded values to indicate entries in the data structure that have been merged.

9. (Original)   A method as recited in claim 1, wherein the data structure comprises the network proximity information.

10. (Original)   A method as recited in claim 9, wherein the method is performed in a content delivery agent configured to deliver content to the plurality of clients.

11. (Original)   A method as recited in claim 9, wherein the method is performed in a request routing agent configured to route content requests from any of the plurality of clients.

12. (Original)   A method as recited in claim 1, further comprising reporting information from the data structure to a request routing server.

13-32. (Cancelled)

33. (Original) A processing system comprising:

a processor;

a network communication device to enable the processing system to communicate with a plurality of clients over a network; and

a storage device containing instructions which, when executed by the processor, cause the processing system to perform a process that includes

creating a data structure that contains information representing the plurality of clients,

acquiring network proximity information relating to the clients, and

dynamically compressing the data structure based on the network proximity information.

34. (Original) A processing system as recited in claim 33, wherein the data structure comprises a network address of each of the clients and the network proximity information.

35. (Original) A processing system as recited in claim 34, wherein said dynamically compressing the data structure based on the network proximity information comprises:

detecting when proximity measurements for at least two clients which share a network address prefix are within a predetermined range of each other; and

in response to the proximity measurements being within the predetermined range of each other for the at least two clients, merging entries for the at least two clients in the data structure.

36. (Original) A processing system as recited in claim 35, wherein said process further comprises:

forming a mask to represent each of the network addresses;

storing the masks in the data structure; and

modifying one or more of the masks to indicate entries in the data structure that have been compressed.

37. (Original) A processing system as recited in claim 33, wherein the processing system comprises a content delivery agent configured to deliver content to any of the plurality of clients, and said process is performed by the content delivery agent.

38. (Original) A processing system as recited in claim 33, wherein the processing system comprises a request routing agent configured to route content requests from any of the plurality of clients, and said process is performed by the request routing agent.

39. (Original) A processing system as recited in claim 33, wherein said process further comprises reporting information from the data structure to a request routing server.

40. (Original) A processing system as recited in claim 33, wherein said process further comprises losslessly decompressing the data structure.

41. (Original)   A processing system as recited in claim 40, wherein said losslessly decompressing the data structure comprises splitting a merged entry in the data structure representing at least two of the clients into a plurality of separate entries.

42. (Original) A processing system as recited in claim 40, wherein said losslessly decompressing the data structure comprises decompressing the data structure in response to a detected change in network conditions.

43-49. (Cancelled)

50. (Origianl) An apparatus comprising:

    means for storing in a data structure information representing a plurality of clients on a network;

    means for acquiring network proximity information relating to the clients; and

    means for dynamically compressing the data structure based on the network proximity information.